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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/053,650  | 04/02/1998  | KWANG CHEOL JOO      | 03586.0013          | 1592             |
| 22852   | 7590        | 08/24/2005           | EXAMINER            |                  |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>901 NEW YORK AVENUE, NW<br>WASHINGTON, DC 20001-4413 |             |                      | BROWN, RUEBEN M     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2611                |                  |

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/053,650 | <b>Applicant(s)</b><br>JOO ET AL. |  |
|                              | <b>Examiner</b><br>Reuben M. Brown   | <b>Art Unit</b><br>2611           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27,28,32,42 and 46 is/are pending in the application.  
4a) Of the above claim(s) 33-41 & 47-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27,28,32,42 and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 4/8/2005 have been fully considered but they are not persuasive. Applicant argues on page 12 that "Metz does not teach at least a first domain, wherein the first domain stores one of (1) a version number of the control program or (2) a predetermined number indicating that the download procedure for updating the control program In the second domain was suspended due to a power failure or a signal transmission error". Examiner respectfully disagrees and points out that Metz teaches that with respect the first alternative of 'storing a version number of the control program', Metz teaches that the non-volatile RAM (NVRAM 121), stores that operating system for the STB 100, see col. 8, lines 9-25; col. 10, lines 1-12. The operating system of Metz, reads on the claimed control program, which includes the version number, see col. 9, lines 55-59.

With respect to the second alternative of the 'first domain, including a predetermined number indicating that the download procedure for updating the control program', Metz teaches that in order to do the checksum procedure, (Fig. 9); "the operating system file downloaded through the network also includes a bit pattern code used to indicate that the data is a valid operating system... The upgrade routine stored in ROM 115 in the DET 102 will include this bit pattern code. ...the microprocessor 110 compares the bit pattern from the broadcast operating

Art Unit: 2611

system now loaded in RAM 122 to the valid bit pattern stored in ROM 115. Metz goes on to disclose that if the bit patterns match at that point, then the new operating system is placed in the NVRAM 121 (which includes the bit pattern, col. 38, lines 12-26). Then, the system again compares that checksum value from the new operating system now loaded in NVRAM 121, (more specifically, the bit pattern). This bit pattern disclosed in Metz, correspond with the claimed 'predetermined number'. Thus, Metz provides both alternatives.

On pages 5-6, applicant specifically argues that Metz only teaches generating the checksum result and does not teach or suggest storing the checksum result in non-volatile memory. Pursuant to the above discussion, examiner respectfully disagrees. It is furthermore pointed out that Metz teaches that the downloaded operating system, which is loaded in to NVRAM 121, includes the bit pattern, which is used in the checksum procedure, col. 37, lines 54-62 & col. 38, lines 14-30. In particular, Metz discusses two checksum procedures in Fig. 9. In the first one, the bit pattern stored in RAM 122, is checked, since RAM 122 is where the downloaded operating system, is located. The second checksum procedure discussed in Metz, takes place once the operating system is loaded into NVRAM 121, and thus the bit pattern also stored in NVRAM 121 is checked.

Applicant also argues on pages 3-4, examiner's citation of Yen to read on the claimed feature of; during the initial boot routine, "automatically updating the control program", when the value stored in the first domain is a predetermined number, i.e., the control program is determined to be corrupted, does not meet the criteria because, in Yen the recovery software is

Art Unit: 2611

not a new version. Examiner points out that the context of this updating as recited in the claims is ‘checking whether or not a value stored in the first domain is the predetermined number’, such that the predetermined number defined in the following manner: ‘a predetermined number indicating that the download procedure for updating the control program in the second domain was suspended...’. So the combination of Metz & Yen does meet the claimed language, since “updated control program”, corresponds to the operating system, received in Metz, once the bit pattern, used in the checksum procedure, indicates that there was an error in the downloading procedure.

As pointed out in the Office Action, Metz doesn’t disclose that when this checking is done during the initial boot routine, automatically updating the operating system, if it was determined to be corrupt as recited in the claim. Thus, Yen is cited for the teaching of checking the status of the operating system during the initial boot routine, col. 2, lines 1-17; col. 3, lines 47-67 thru col. 4, lines 1-40. Moreover, to further support the applicability of Yen, examiner points out that the reference teaches that the recovery software may be found on the network, (col. 4, lines 13-29) which means that Yen provides for automatically downloading (i.e., downloading) a new operating system, when the boot routine determined that the operating system is corrupted.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 27-28, 32, 42 & 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metz, (U.S. Pat # 5,666,293), in view of Yen, (U.S. Pat # 6,381,694).

Considering claim 27, the claimed downloading apparatus for a broadcast receiver, comprising:

‘receiver which receives a broadcast signal having a program signal and control information signal’; col. 6, lines 50-65; col. 7, lines 62-67 thru col. 8, lines 1-2 & Fig. 1 teach a STT 100, including a DET 102 that receives video programs and operating system software, which reads on a ‘control information signal’.

‘storage element which stores a control program, such that the control program controls the operation of a video program corresponding to the video program’; reads on the DET storing the operating system for the STT, which defines the basic operations of the STT 100, col. 8, lines 9-34.

Art Unit: 2611

‘storage element further comprising RAM for temporarily storing the downloaded control program’, met by col. 10, lines 1-9 & col. 17, lines 45-56, newly extracted operating system is stored in RAM 122.

‘non-volatile RAM including a first domain that stores predetermined number indicating that the downloaded procedure was suspended due to a power failure or transmission error’; reads on the checksum value that the DET checks to see whether it corresponds with the bit pattern used from the checksum procedure, col. 37, lines 44-67 thru col. 38, lines 1-40 & Fig. 9. In particular, in a checksum procedure, a checksum value is calculated and stored in ROM 115 to be used to check the validity of the new operating system. This bit pattern from ROM 115 is compared to the bit pattern downloaded with the operating system in Metz, and which accordingly is first stored in RAM 122 and then in NVRAM 121, (col. 38, lines 14-30) along with the operating system, which reads on the claimed feature, emphasis added. Termination of the processing of the first operating system, reads on ‘suspending the download procedure’ since the download procedure for the corrupted operating system has been suspended.

‘initial boot routine includes checking whether or not a value stored in the first domain is the predetermined number and if so, automatically updating the control program’, Metz discloses that the version number of an incoming operating system is checked against the current operating system and if the numbers do not match, then the incoming versions is extracted, col. 10, lines 1-9 & col. 17, lines 45-56. Metz also teaches that in an initial boot routine, the system can check for faults in the software programs or in the DET 102, (col. 22, lines 25-45) but does not

Art Unit: 2611

specifically discuss checking whether the operating system is corrupt and then automatically updating the operating system, (i.e., control program) as claimed. Nevertheless, Yen teaches a method that upon start-up the system detects if the operating system is corrupted and if so, may automatically download a new version from a network server, (col. 4, lines 1-29). It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Metz with the feature of automatically downloading a new operating system, when a corrupted operating system is detected upon start-up for the advantage of avoiding a computer user the trouble of trying to navigate a generally complex system to achieve the same result, as taught by Yen, (col. 3, lines 45-67).

Even though Metz, uses opposite logic from the claimed invention, in that in Metz, the system is upgraded when old and new operating system numbers do not match (indicating they are different versions), whereas in the instant invention, the system is upgraded when the predetermined number being looked for (with respect to the version being looked for) matches the incoming new operating system. Official Notice is taken that choosing an item when a match is found, was well known technique in the art at the time the invention was made. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Metz to operate according to the known technique of looking for a particular version number which is more precise than Metz, since Metz could potentially download any operating system with a version number different from the current version, which would potentially extract a version that it not specifically needed. However, it is more precise to search for version that has a



Art Unit: 2611

specific identification number and only download the operating system that matches that instant version number.

Considering claim 28, wherein the broadcast signal includes a PID in order to identify the type of information of the broadcast signal, Metz teaches such a feature, col. 36, lines 54-56.

Considering claim 32, the claimed signal processor for separating the control information signal from the broadcast signal reads on the disclosure of Metz, which teaches extracting the download program from the transmission stream, col. 10, lines 1-5.

Considering claim 42, the claimed method steps for downloading a control program from a broadcast signal in a digital receiver, corresponds with subject matter mentioned above in the rejection of claim 27, and is likewise treated.

Considering claim 46, Metz teaches that the operating system, which necessarily includes its version number, is stored in non-volatile RAM, col. 17, lines 40-45 & col. 18, lines 1-10, which reads on the claimed subject matter.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2611

**Any response to this action should be mailed to:**

Commissioner for Patents  
P.O. Box 1450  
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[www.uspto.gov](http://www.uspto.gov)

**or faxed to:**

(571) 273-8300, (for formal communications intended for entry)

**Or:**

(571) 273-7290 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown



**HAITRAN**  
**PRIMARY EXAMINER**